ICT Final Revision

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First Axis – (The role of ICT in our lives)

Lesson 1: Explorer in Action

- ✓ Albert Lin is an archeologist that thinks of "how to explore the archeological sites without digging (drilling)"
- ✓ There are different types of technology that enables archeologists to explore (where to dig and what they will found)

Different Types of Technology:

ט Tools under the ground

1-The GPR (Ground Penetrating Radar): is a way to find the buried objects underground.

2-The Magnetometer: is a device that measures the magnetic under the ground.

ט Tools above the ground

3-The GPS (Global Positioning system): a means of locating something.

4-Satellite: is used to take pictures of different places, as well as for communications.

5-Drone: is used to take picture of the different places.

You don't have to be a scientist or archaeologist or even an adult to be able to use technology

Lesson Three: Computer Components

- ➢ The Computer: is an electronic device that receives the data and transforms it into information.
- ➢ You can use your computer to write documents, send e-mail, play games, surf the internet.
- ➢ You can also use your computer to edit or create spreadsheet, presentation and even video.

Some types of computer:

1-Personal Computer (PC)
2-LapTop
3-Smart phones (iPhone and the tablet)

Computer units are also divided into two parts:

A. Hardware.
B. Software.

Computer units are divided into two parts:

A. Input devices. B. Output devices.

1. Input devices		2. Output Devices	
Keyboard	Allow input of text – Letters and numbers.	Screen	Display image, video visual information: text,
Mouse or Touch screen	Allow interaction with and select information. Directional data.	Braille terminal	Text in Braille for blind people. Way convert letters into prominent symbols that can be read by touching.
Microphone	Allow input of audio – Sound and music.	Speaker	Allow output of audio. Audio.
Camera	Allow input of images. Images or videos,	Speech Synthesizer	Allow non-verbal to speak Audio
Scanner	Allow input of text and images from paper.	Printer	Allow output of text and images on paper.

Lesson Four: Software and operating system

→ we do many things with our devices, we play games, write notes and go on the internet. **But how does this all happen?**

→**Computer components are divided into:**

1- **Hardware:** It is the **touched parts** that make up a computer and it is divided into input units, output units, and the central processing unit.

📖**The Central Processing Unit)CPU(** is responsible for **processing and controlling data** and converting it into information that it sends back to the operating system.

2- **Software: -** It helps the user to do the tasks he needs

→**Software includes**

a) **Operating System:** Responsible for **running the computer** and helping the user to run various programs, such as Windows.

b) **Programs and applications:** such as presentations – word processor – Google Chrome browser – gaming applications

Lesson Five: Support people of determination

People of determination: are people who could not do something or found difficulties to do something.

The assistive technology: The technology that helps the people of determination to do difficult things.

- **Albert Lin:**
  He has a limb difference but he didn't let that stand in the way of his success.
- **Stephen Hawking:**

physicist who used the **robotic chair** to move, and was equipped with a system that **enables him to speak**.

Assistive Technology	Function
Screen magnification / zoom software	**Enlarge everything** on computer screen. Allows people with poor vision or visual impairment to interact with computer, read digital /e-book, e-magazine
Alternate communication software	Help people with **speech and language** disabilities to communicate. Example software turns text to speech and speech to text.
Hearing Aids	Help people with **hearing troubles**.
Sporting tools	Para **climbing tools** allow climbers with limb difference.
Footballs that make a noise	for **blind** people
Hand bike that has 3 wheels	which powered by hands and also **Running blades**

Lesson Six: common problems and solutions

❁: Technology tools, such as a PC, laptop, or tablet, help you

→ Do the tasks that assigned to you by your teacher

→Search for information on the internet

→Writing reports and assignments using word processing software → Use it in games

Problem	Solution
1. App won't open	1. Restart computer and try again 2. Check software updates. 3. Uninstall and reinstall the app. 4. Ask your teacher or family for help.
2. The mouse cursor isn't working	1. Make sure you connect the mouse cable to correct place in the motherboard and restart your device. 2. Replace the mouse 3. Ask your teacher or family for help.
3. You can't find a file	1. Check Downloads folder. If you looking for word file, look in Documents folder. If you looking for photo, look in Pictures folder. 2. Use Search box next to start button. 3. Ask your teacher or family for help.
4. Your screen freezes	1. Press and hold "Ctrl + Alt + Del" buttons together. 2. Try to power off computer and restart. 3. Ask your teacher or family for help.
5. The keyboard isn't typing	1. Make sure you connect the keyboard cable to correct place in the motherboard and restart your device. 2. Replace the keyboard 3. Ask your teacher or family for help.

Lesson Seven: Data collection, analysis, and graphic representation

1) **Collecting data:** common sources to collect data are

- Books and articles (digital or print)
- Records (such as logs and reports)
- Surveys
- Experiments

✓ It's very important to certain the information you collected is accurate and always be sure to use sources can be trusted.

2) **Analyzing data:**

✓ When you analyze data, review your findings. Then interpret what findings mean.

✓ The best way to interpret a lot of data is to look for trends in information.

3) **Graphing information:**

- Common graph is bar / column graph
- Bar / column graph: clearly present and compare different categories of information.
- You can draw graphs on paper or make them on computer using software like excel.

2) The "Excel" program: is a program from the Microsoft Office group to sort and analyze your data in tables or charts

3) To open the "Excel" program:

Start → All Programs → Microsoft Office →Microsoft Excel

4) The home page components:

1-Title bar 2-Menu bar 3-Tool bar 4-Excel sheet

5) The excel sheet contains:

1-Rows 2-Columns 3-Cell

6) The cell: is the intersection between the row and the column

Insert your data in the excel sheet

Second Axis – (Digital safety and securityprecautions)

Lesson 2: Online dangers and how to be safe

There are many ways to communicate via the Internet, such as using computers, phones, and tablets.

You can communicate with your colleagues, through: – instant text messages, e-mails, direct messages, and chatting through discussion forums.

You should pay attention: There are some people who – communicate via the Internet for bad purposes , or with the aim of stealing your personal information, and make sure you know the identity of the person you are talking to online.

- If you come into contact with an unkind person online, you can block them from contacting you.
- If you block Block someone, you won't be able to do this the person who communicates with you or see your account
- Be careful and do not click on links whose content you do not know.

Sharing data and information on the Internet:

- Do not share your personal information online without the consent of your teacher or family.
- If you share your personal data on the Internet, you may receive spam and unsolicited messages

Spam messages: They are unwanted messages to advertise a product or obtain information from you and may contain viruses or unknown hyperlinks.

Note : Spam may include a title , unknown electronic links , or texts written in capital letters.

Download files: You can save and download the files you – want while you are using the Internet; To be able to open it at a later time without need to connect to the Internet.

Think carefully before you download any file. Some of them contain viruses that may harm your device or track your information; So check the site you are downloading the files from.

Lesson 3: How to search on the Internet?

- Posting information on the Internet:

When you want to publish information about your friends on Make social networking sites and mention them in your posts sure to ask their permission first, as this will show that you respect their privacy.

- Tag : is the identification of a person in)post or photo .or a video clip)

This hashtag or mention includes a link to that person's profile So you have to make sure that the person you are referring to : does not object to it

- Before publishing any post, ask yourself the following question:

1– Is the content of this publication good?

2– Does it harm anyone?

If you are not sure about it, do not post it

- Crediting Others: When you are looking for information to publish on the Internet or for inclusion in a Power Point PresentationIt is important that Document the source of the information you share and mention theowners. By mentioning the source of the information, you are telling others that this information is Ownership of the owner of the source individual or company(and its preference belongs to him(

- Respecting the law:

  Whether you are publishing information on the Internet or researching topics, make sure to respect the law. Do not go to prohibited sites that publish inaccurate or harmful topics.

Positive effects of using ICT	Negative effects of using ICT
–View the news with one click of the mouse	–Maybe you see something on the Internet that annoys you
–download videos and photos, to your device, and watch them whenever you want	–You may feel tired in your eyes or a headache as a result of using electronic devices
–Communicate with your friends and family members wherever they are anywhere in the world	–Some people rely on Google to find answers to all their questions

Lesson 4: How to search on the Internet?

- **Smart Search:**
  - Type long sentences when searching for better results.
  - If you are looking for information about a specific image, you should use the image instead of the word you are searching for by pressing the Google Camera button and entering the image.
  - Add the (+) symbol before the word you enter to ensure that your search is covered.
  - Add the symbol (–) before the word that you do not want to include in your search.
  - If you are looking for a specific sentence, put it in quotation marks " " to shorten the results.
- **Internet Browser:**
  - It is a program used to browse the Internet. chrome
- **Search Engine:**
  - A program used to access information on the internet such as Google
- **Search Results:**
  - A list of results is collected and displayed as a result of the search process.

Lesson 6: Who can help you solve your problems while using the Internet?

🕮 Internet bullying and how to stop it

→**Bullying:** When one person behaves badly towards another person, repeatedly

Bullying can include:

texts | messages | posts

- A bully can share these posts, messages, or texts with you alone or with others, and it is difficult to escape from this type of bullying
- Always be careful not to communicate with unknown people For you, and to inform your guardian of any situation that you may be exposed to so that he can help you

→**Identity theft on the Internet**

It is possible for a person to steal your identity or the identity of a member of your family via the Internet , and at that time the thief can use your personal information and can access your accounts on social networking sites, your home address, e-mail, or phone number

Lesson 7: Personal Digital Security Plan

❑ Create strong passwords :

- It is important to have strong passwords, if they are easy to predict, some people hackers , computer hackers may be able to access your computer or the Internet, and this is what is known as piracy or hacking

- Do not use one password to access all your accounts, if someone knows your password, He will be able to access all of your accounts
- It is difficult to remember many passwords, so use a password management system or prepare a list of these words and keep them in a safe place

❑ Consider the following to create a strong password :

- To include letters and numbers
- The password should consist of eight characters
- The password does not include your name or any personal information

❑ Dangerous programs that lead to serious problems if Sending emails Viruses: they infect the computer without your knowledge to the addresses of everyone on your device, Delete your files

❑ Antivirus programs : They are programs that protect your devices from infection with viruses . When choosing antivirus programs, it is preferable to choose an easy-to-use program

❑ Be careful when using the Internet and that is through :

- Choose different passwords for your accounts on social networking sites, your email and your digital devices.
- Use antivirus software on these devices.
- There are sites that provide some insurance services for your accounts.

Lesson 8: Practicing what you learned

Researchers or explorers prepare digital reports on the subject of their study using:

- Advertising posters
- video clips
- Presentations with powerpoint

1- Power point program

- A program produced by Microsoft, whose task is to prepare presentations through presentation slides
- It is a great way to present your ideas to others, as you can make your texts great using word art . Add text and images to your presentation fun..... sound effects to it

2- Video clips

- You can prepare your own video as a display for the research you have conducted, and you do not need expensive machines to prepare it. You only need a computer or mobile phone to record video and audio videos
- You can also interview others and add them to your video
- There are many mobile phone applications that can help you prepare videos

3 -posters

- You can use posters as a way to present your ideas
- It is an entertaining and effective way to present ideas, as you can display information through pictures and graphics
- Make sure to write in bold so that others can read the information from afar, and present your ideas clearly
- Do not forget to mention the source of your information